to the angelements.	gle or channel	tracks. Detacha	ble metal	mits are		
SUB CODE:	13/ SUBM DA	TE: 12Nov64				
•						
:				•	. •	•
:		•				

DMITRIYEV, V.P.

Basic characteristics of the geology of the Zarechenskoye barite-complex metal deposit. Gool. rud. mestorosh. 6 no.2397-101 Mr-Ap 164. (MIRA 17:6)

1. Zapadno-Siłdrskoye geologicneskoya upravleniye.

L 46052-66 EWT(d)/FSS-2 GD ACC NR: AT6022345 SOU

SOURCE CODE: UR/0000/66/000/000/0052/0057

AUTHOR: Dmitriyev, V. P.

ORG: None

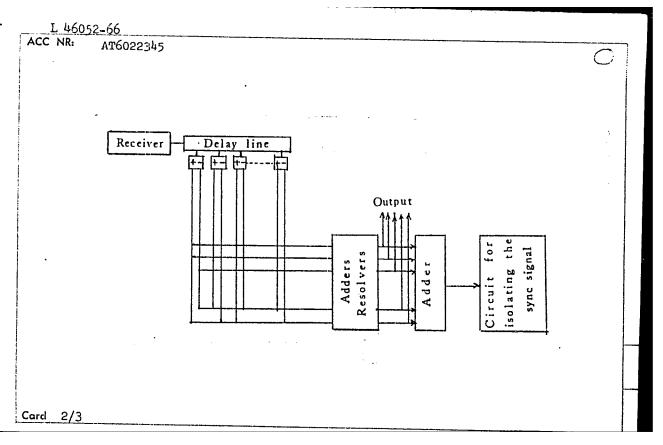
TITLE: Self-synchronization of codes with redundancy

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966. Sektsiya teorii i tekhniki peredachi diskretnykh signalov. Doklady. Moscow, 1966, 52-57

TOPIC TAGS: error correcting code, synchronous communication, circuit delay line, data transmission, electric filter, filter circuit, circuit design

ABSTRACT: The author proposes the use of matched filters (delay-line or digital) for eliminating the necessity for explicit synchronization when codes with redundancy are used for error detection or correction. The circuit shown in the figure may be used for isolating the phasing signal. The receiver is an ordinary matched filter with a delay line having parallel outlets which correspond to the various code words. These outlets are added and fed to the circuit for isolating the sync signal which may be either a resolver with storage, a recirculator or a narrow-band filter. It is assumed that the signals are equally probable and follow one another in random order. Since the code received is not self-synchronizing, pulses appear at the output of the

Card 1/3



L 46052-66 ACC NR: AT6022345

matched filter not only when code words are being received but also when overlap of code words forms a code word. In the case of minimum redundancy per digital place for a code with parity check, there is a 50% probability for appearance of a false pulse. Similarly for (n, k) codes with greater redundancy, the probability of formation of a code combination by overlap of code words is approximately  $p \approx 2^{-(n-k)}$ . A maximum-probability method is proposed for isolation of the synchronization signal and the operating accuracy of the system is determined for the case of a narrow-band linear filter. Curves are given showing the probability of reliable synchronization as a function of redundancy for Q-factors of  $10^2$  and  $10^3$ . Orig. art. has: 3 figures, 7 formulas.

SUB CODE: 09/7/SUEM DATE: 09Apr66/ ORIG REF: 002/ OTH REF: 001

Card 3/3 JS

BELYAZO, Ivan Afanas'yevich; <u>IMITRIYEV</u>, <u>Valeriy</u> Razumnikovich; NIKITINA, Yelena Vasil'yevna; <u>FESTRIKOV</u>, Aleksandr Nikolayevich; <u>ZHIL'TSOV</u>, P.N., inzh., retsenzent; MARENKOVA, G.I., inzh., red.; MEDVEDEVA, M.A., tekhn. red.

[Route-relay interlocking systems] Marshrutno-releinaia tsentralizatsila. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei socbshcheniia, 1962. 282 p. (MIRA 15:5) (Railroads--Signaling --Flock system) (Mailroads--Signaling-Interlocking systems)

#### PHASE I BOOK EXPLOITATION

1083

- · Belyazo, Ivan Afanas'yevich, Dmitriyev, Valeriy Razumnikovich, Nikitina, Yelena Vasil'yevna, and Pestrikov, Aleksandr Nikolayevich
  - Elektricheskiye releynyye tsentralizatsii (Electric Interlocking Systems) Moscow, Transzheldorizdat, 1958. 195 p. 5,000 copies printed.

Ed.: Rakito, E. I.

PURPOSE: This monograph is addressed to engineering and technical workers employed in railroad signalling and communications.

COVERAGE: The book discusses standardized circuits of centralized traffic control systems, which are used today (regardless of the system of control) in designing and constructing electric relay interlocking systems. The function of circuit components and the operation of the circuits as a whole are described for interlocking systems with sectional control. The book describes plug relay designs and presents reference material on relays and trans-

Card 1/7

Electric Interlocking Systems 1083

formers. There is an insert containing connection diagrams of the interlocking relays discussed in the text. Giprotranssignalsvyaz' (State Institute for the Design of Railroad Signalling and Communications Equipment) is credited with having developed in 1945 and 1946 two interlocking systems. These systems are described in the present work. No personalities are mentioned. There are no references.

#### TABLE OF CONTENTS:

<b>-</b> •	General Principles of Relay Interlocking Basic aspects	
	Components of interlocking equipment	į
cn. II.	Control Equipment	f
2.	Track indicator control panel Rack with auxiliary pushbuttons	$\tilde{\epsilon}$
3.	Dwarf signal post	.15
	-G p000	16

Card 2/7

Electric Interlocking Systems 1083	
Ch. III. Characteristics of Standardized Circuits of All-relay Interlocking Systems  1. General requirements of circuit design  2. Principles of circuit design	18 18 19
Ch. IV. Operation of Circuits of the Actuating Relay Group  1. Connection diagram of directional relays  2. Connection diagram of initial, final, and general switching relays	24 24
3. Connection diagram of sectional control relays 4. Connection diagram of signal relays 5. Connection diagrams of track light signals and of their	26 29 34
6. Connection diagram of track indicators 7. Connection diagram of locking relays 8. Connection diagram of lock-out relays 9. Connection diagram of route relays 10. Connection diagram of emergency locking relays	41 47 50 53 55 59
11. Connection diagram of circuit for automatic release of Card 3/7	) <del>)</del>

Electric Interlocking Systems 1083	
unoccupied section of train route  12. Emergency locking without time delay  13. Switch control system  14. Local switch control  15. Connection diagram of control panel indicator lights  16. Connection diagram of interstation lock-out relays  17. Sequence of operation of circuits when setting up and using route	61 67 68 78 83 89
	93
Ch. V. Operation of Circuits of Route Set-up Relay Group 1. Connection diagram of pushbutton relays 2. Connection diagram of automatic pushbutton relays 3. Connection diagram of switch-control and route-initiate relays	96 97 99
4. Connection diagram of directional relays 5. Connection diagram of anti-repeating relays 6. Connection diagram of auxiliary final switching relays 7. Connection diagram of control pushbutton lamps	101 103 109 110 111

Electric Interlocking Systems 1083	
Ch. VI. Superposition of Route Set-up Circuits on the Circuits of the Actuating Relay Group  1. Initial, final and general switching relay circuits 2. Sectional control and signalling relay circuits 3. Starting switch relay circuit 4. Connection diagram of lamps for isolated switch section and of control lamps over the switchboard 5. Sequence of operation of route set-up circuits  Ch. VII. Power Supply Units	112 112 113 114 114 116
2. Power supply 3. Power supply circuits	122 122 123
Ch. VIII. Design of Circuits of an Electric Interlocking System 1. Standard components of circuits 2. Utilization of standard components	126 126 128
Card 5/7	•

Electric Interlocking Systems 1083	
Ch. IX. D-C and A-C Plug-in Relays  1. General information  2. NSh1 type neutral relay  3. NSh1P2 type neutral starting relay  4. NPSh1-150 type neutral starting relay  5. NVSh1 and NVSh2 types a-c track circuit relays  6. OSh1 type lamp burn-out control relay  7. A-c control relay  8. KSh1 type polarized relay  9. SKSh1-250 type polarized interlocking relay  10. SKPSh1 type polarized interlocking starting relay	131 131 139 140 141 145 147 149
Cn. X. Disposition and Assembly of Equipment in the Inter-	156
Disposition of equipment  Wiring diagram of track indicator control panel  Wiring diagram of code relay rack  Wiring diagram of company rack	161 161 163 <b>167</b>
rack and of switch rack without isolation control	170

Electric Interlocking Systems 1083	
<ul> <li>Wiring diagrams of racks for WSh and KSh type relays</li> <li>Wiring diagrams of racks for NR and KR type relays</li> <li>Interstation cable network</li> </ul>	
Appendixes.	180
1. Types of track indicator control panels 2. Switchboards for track indicator panels 3. Pushbuttons for track indicator control panels 4. Conventional symbols for circuit components of the electric interlocking system 5-10. Electric circuits of the relay interlocking system	186 188 190 192 (insert)
AVAILABLE: Library of Congress	·
JP/mfd 2-2-59	
Card 7/7	

DMITRIYEV, V.R., inzh.; LEREDEV, V.A., inzh.

Power supply system of electric interlocking devices without batteries. Avtom., telem. i sviaz' 8 no. 6:4-6 Je '64. (MIRA 17:6)

PASHKIN, N.M., inzh.; DMITRIYEV, V.R.

Control board with single-contact route button. Avtom., telem. i sviaz' 8 no.7:6-7 Jl '64. (MIRA 17:12)

DMITRIYEV, V.R., inzh.

A track switch unit. Avtom., telem. i sviaz' 8 no.4:7-10 (MIRA 18:2)

DMITRIYEV, Viktor Sergeyevich, kand.tekhn.nauk, prepodavatel'

Use of  $B_{-}^{-}$  f(H<sub>\*</sub>) characteristics with H<sub>\*</sub> - H<sub>\*</sub> = const in designing saturable reactors. Izv. vys. ucheb. zav.; elektromekh. 6 no.5: (MIRA 16:9)

1. Vyssheye voyenno-morskoye inzhenernoye uchilishche.
(Magnetic circuits) (Electric motors)

YEFIMOV, G.K., mladshiy nauchnyy sotrudnik; DMITRIYEV, V.S.

A selective device for measuring the harmonic components of traction network current. Avtom., telem. i svias 7 no.1:7-9 Ja 163.

(MIRA 16:2)

1. Vsesoyuznyy nauchno-issledovatel skiy institut zheleznodorozhnogo transporta Ministerstva putey soobshcheniya (for Yefimov). 2. Starshiy inzh. Vsesoyuznogo nauchno-issledovatel skogo instituta zheleznodo-rozhnogo transporta Ministerstva putey soobshcheniya (for Demitriyev).

(Electric railraods—Current supply)
(Electric railraods—Electric measurements)

SHISHIYAKOV, A. V., kand. tekhn. nauk; YEFIMOV, G. K., kand. tekhn. nauk; DMITRIYEV. V. S.

, 1'

Track circuit with tuned resonant joint transformers. Avtom., telem. i svias 7 no.4:4-7 Ap 63. (MIRA 16:4)

1. Starshiy inzh. laboratorii avtoblokirovki i avtoregulirovki Vsesoyuznogo nauchno-issledovatel'skogo instituta zhelezno-dorozhnogo transporta Ministerstva putey soobshcheniya (for Dmitriyev).

(Railroads—Signaling—Centralized traffic control)

DMITRIYEV, V.S.

"Michurinian Agrobiology - Scientific Basis for Today's Agronomy," Sov. Agron., No. 5, 1949

DMITRIYEV, V. S.

"The Stalin Method of Developing Agricultural Science," Agrob., 6, 1949

DITTRIYEV, V. 3.

36293 Akademik V. R. Vilyams o vvyedenii travopol nykh sevooborotov i svyazannykh setim voprosalh zemledeliya i rasteniyevodstva. Sov. agronomiya, 1949, No. 11, S. 24-36

SC. Letopis' Zhurnal'nykh Statey, No. 49, 1949

USSR/Biology (Agriculture) - Genetics Nov/Dec 51
"The Origin of Errams Secalinus ("Rzhanoy koster") and Measures for Its Elimination," V. S.
Daitriyev

"Agrobiologiya" No 6, pp 6-15

Discusses the origin of weeds which are not found in the wild state, but grow only in cultivated which infests rye fields, that it is an error to other Errams secalinus plants; it may also originate from rye. Describes a variety of rye from nate from rye. Describes a variety of rye from USSR/Biology (Agriculture) - Genetics Nov/Dec 51

the vicinity of Velikiye Inki, which in its type approaches Bromus secalinus.

20071

USSR/Biology (Agriculture) - Which in its type approaches Bromus secalinus.

Peranatay, 4, S.

EPP. .R93103

STALIESKIY PLAN PRECBRAZOVANIYA PRIRODY PRETVORVAYETSIA V ZHIJNY. MOSKVA, IZD-VO ZNANIYE, 1952. 21 p. (VSENOYUZNOYE OBCHCHESTVO PO RASPROSTRA-NENIYU POLITICHESKIEH 1 NAUCHNYKH ZNANIY)

DHITATIST, V. S.

Vetch

Derviation source of flat-seeded vetch. Agrobiologiia

SO: Monthly List of Russian Accessions, Library of Congress, \_\_une 1952 \_\_\_ 1953, Uncl.

DMITRIYEV.V.S.

Darwin's theory on the origin of species in Lysenko's works. Izv. Akad. nauk SSSR, ser. biol. no. 3:30-49 May-June 1952. (CIML 22:4)

DMITRIYEV, V. S.

""Question of Variety Development and Weed Control," Sov Agron., 10, No 4, 1952

MLRA, July 1952

- 1. DMITRIYEV V.S.
- 2. USSR (600)
- 4. Species, Origen of
- 7. Useful pamphlet for teachers ("New developments in science on the biological species and formation of the species." V.S. Dmitriyev. Reviewed by A.N. Lavrov). Est. v shkole no.1, 1953.

9. Monthly List of Russian Accessions. Library of Congress, April 1953, unclass.

DMITRIYEV, V.S., professor.

Some problems on the formation of species. Est. v shkole no.3:91-96 My-Je '53. (MLRA 6:5)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova. (Species, Origin of)

DIMITRIYEV, V. S. Prof.

"Concerning the Relation of Soil Formation to the Formation of Species of Plants and Microorganisms," a paper given at the All-University Scientific Conference "Lomonosov Lectures", Vest. Mosk. Un., No.8, 1953.

Translation U07895, L Mar 56

- 1. DMITRIYEV, V. S., Prof.
- 2. USSR (600)
- 4. Plants-Evolution
- 7. Origin of crop species for which no wild parent species have been found. Sov. agron. 11 No. 11, 1953

9. Monthly Lists of Russian Accessions, Library of Congress, March 1953, Unclassified.

IEV, V. S.	50 H	្រុក ១ ជ ជ ជ ជ	PA 244T8	a l	ن
	lack mycorrhiza. a direct connect formation, and so	Cites data tion, proversed by erated by a mated by a are genera while the	"Pring Weeds: Contar	FEST	
	дуо rect	es data which the prove that the prove the cuived by these we generated by the the useful	mar .s: .ami	/B1	
•	t cc	data which prove that prove the cul by these winerated by the useful	y S Co nat	010	
	hiz nne nd	wh: - the the the the ted	our nce ion	8	
•	ck mycorrhiza. Codirect connection smation, and soil :	data which, prove that; prove that; data which, and the cult by these were merated by the useful property of the useful provessed that the useful provessed the useful provessed that the useful provessed the useful provessed that the useful provessed the useful	ces rnii of	Ag:	
			"Primary Sources of the Formation of Some Sweeds: Concerning the Complete Elimination Contamination of Fields With Weeds," V. S. "Zhur Obshch Biol" Vol 14. No 1. on 41-70	USSR/Biology, Agriculture	
	244T Concludes from this that there is n between species formation, soil fertility.	according to author's interpreta- several species of weeds are gen- tivated plants which are contami- eds. Notes that the weeds which cultivated plants possess mycorrhi plants generated by weeds (e.g. oa	the Formation of Some Species of the Complete Elimination of the lelds With Weeds," V. S. Dmitriev Vol 14. No 1. on 41-70	ıltı	
<b>I</b>	ude Wees	Regularin din	741 787 1602 94 6	tre	
	y s	ding to author's int l species of weeds a d plants which are of Notes that the weeds ated plants possess generated by weeds	ple th	- Genetics	
	from this species for	Les Les Leant Lant Leant	tion te I	ene	
	es thi	thic by	a od	ties	
	ton t	8880 880 880 880 880 880 880 880 880 88	. A., ediu	··	
	that	eds eess eess	s. S.		
	there	nterpreta- are gen- contami- ls which mycorrhiza, (e.g. oats)	Speci n of Dmit	Jan/Feb 53	
42	are Si	gen- gen- tami- hich corrh	pecies on of the Dmitriev	/Fe	
8L412	1108 e 18 544TB	ta- n- i- h h oar	les o the tri <b>ev</b>	ه. م	
Francisco Company	<sup>w</sup>	8 23	ř,	ω	

- 1. DMITRIYEV, V.S., Prof.
- 2. USSR(600)
- 4. Agriculture
- 7. I.V. Stalin and the development of Soviet science of agronomy, Prof. V.S. Dmitriyev, Sel. i sem. 20 no. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Unclassified

DMITRIYEV, V. S.

Professor V. S. Dmitriyev, Voprosy vidoobrazovaniya i bor'ba s sornyakami (Priblems of Species Formation and Weed Control), Sel'khozgiz, 12 sheets.

A study of the origination of several species of weeds from the seeds of cultivated plants, and of the generation by weeds of cultured species of agricultural plants. By controlling the conditions of cultivation, the author obtained: from rye seeds -- rye brome grass; from oat seeds -- wild oats; from wild oat seeds -- oats; and from lentils -- flat-seeded vetch. The author recommends several measures which ensure complete eradication of such weeds as rye brome grass, wild oats, etc.

The booklet is intended for agronomists, biologists, and other agricultural specialists and supervisory workers.

50: U-6472, 18 Nov 1954

USSR / Weeds and Weed Control

N

Abs Jour: Ref Zhur-Biol., 1958, No 17, 77953

: Dmitriyev, V. S. Author

.Inst

: Not given: : Successful Test of the Control of Bearded Oat. Title

Orig Pub: Agrobiologiya, 1957, No 6, 107-111

Abstract: Data of the Dergachev region of the Saratovskaya ollast show that prolonged cultivation of ear grains on a given plot is one of the deciding causes for the choking of young crops by bearded oat. In the case of a break in the cultivation of ear grains even on pure fallow, choking of the young crops decreases sharply. Sedge develops best of all on short term fallows. The liquidation of fallows in crop-rotation fields and the permanent utilization of these plots under cultivation sharply

7

Card 1/2

\* DERGACHE USHAYA MASHINNO - TRANSTERNAYA STANBINA, SARATORAKAYA BELAST.

USSR / Weeds and Weed Control

N

Abs Jour: Ref Zhur-Biol., 1958, No 17, 77953

Abstract: decrease the choking of fields by bearded oat, especially if the fallows are ploughed in dry weather by terracing plows with ploughpoints to a depth of 27-30 cm. For the control of bearded oat, black fallow is effective under vation in combination with its proper culti-rye for fodder along with mustard stubble). It and barley according to virgin and fallow lands, or else in crop rotation fields already subjected to the action of black fallow and cultivated crops.

Card 2/2

DMITRIYEV, V.S.

Increasing grain farming and some problems of weed control in the Volga region. Zemledellie 7 no.2:45-49 F 159.

(MIRA 12:3)

l.Nachal'nik Saratovskogo oblastnogo upravleniya sel'skege khozyaystva.

(Volga Valley--Grain) (Weed control)

#### DMITRIYEV, V.S.

Utilization of local surface runoff in the trans-Volga region.
Zemledelie 7 no.3:29-36 Nr '59. (MIRA 12:4)

1. Nachal'nik Saratovskogo oblastnogo upravleniya sel'skogo khozyaystva.

(Volga Valley-Irrigation)

DMITRIYMV, V.S.

For persistent introduction of correct farming practices in arid steppes of the trans-Volga region. Zemledelie 7 no.6: 14-19 Je 59. (MIRA 12:8)

1. Nachal'nik Saratovskogo oblastnogo upravleniya sel'skogo khozyaystva.

(Volga Valley--Agriculture)

DMITRIYEV, V.S., prof.

So-called "fatuoids" and measures for controlling wild oats.
Zemledelie 23 no.1:84-90 Ja '61. (MIRA 13:12)

l. Nachal'nik Saratovskogo oblastnogo upravleniya sel'skogo khozyaystva.
(Oats) (Wild oats)

Concerning the article of D. Rowlands. Agrobiologiia ro. 1:94 Ja-F '61. (MIRA 14:2) (Mimicry (Biology)) (Vetch) (Lentiles)

MAITRIYEV, V.S., prof.

Ridding durum wheat fields of soft wheat and wild oats. Zemledelie 23 no.3:39-45 Mr '61. (MIRA 14:3) (Wheat) (Weed control) (Wild oats)

MITRIYEV, V.S., prof.

Some problems of the development of irrigation in the trans-Volga region. Zemledelie 24 no.10:16-28 0 '62.

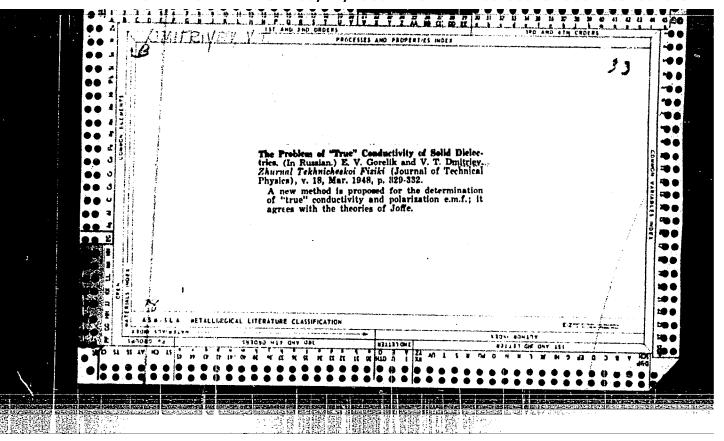
(MIRA 15:11)

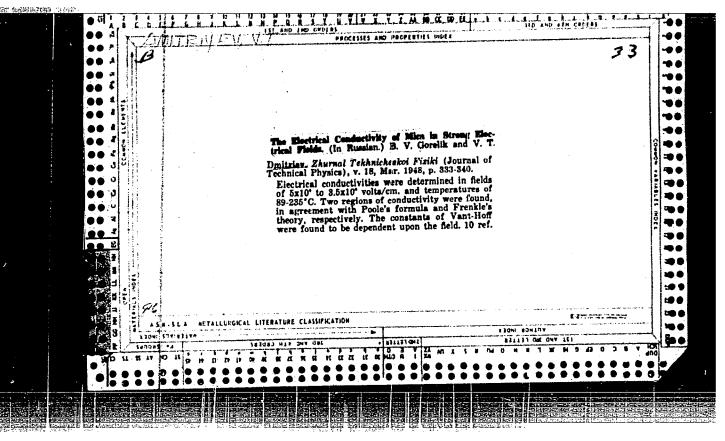
(Saratov Province---Irrigation farming)

MEDVEDEVA, A.F., essistent; IMITRIYEV V.S., prof., nauchnyy nukovoditel\*

Acute odontogenic osteomyelitis of the jaws. Vop. obehcheistom. 17:57-59 64.

Chronic odontogenic osteomyelitis of the jaws. Ibid. 260-65 (MRA 18:11)





SOV/1778

describe transistor application in measuring circuits, computers, radio and automatic and remote control circuits. The book is based on transactions of the Scientific and Engineering Conference organized by NTO in Moscow in December 1956. The conference discussed 54 papers on thermistors, photocells, thermocouples, cooling elements, nonlinear capacitors, crystal diodes, and transistors. A considerable number of these papers have been included in the present book. No personalities are mentioned. References appear at the end of each article.

# TABLE OF CONTENTS:

Foreword

3

O.G. Yagodin, Candidate of Technical Sciences. Determination of Point-contact Transistor Parameters Under Dynamic Conditions

5

The author discusses the operation and characteristics of transistors and describes methods of obtaining their parameters. Particular attention is given to the operation of a transistor amplifier with regenerative

Card 2/12

SOV/1778

25

39

feedback. Operation of circuits used for experimentally determining transistor parameters is also discussed. There are 4 references of which 2 are Soviet, and 2 English

N.K. Povarov, Candidate of Technical Sciences. Electronic Devices Fed by Current Generators

The author describes the static and dynamic characteristics of nonlinear elements and discusses their equivalent circuits. He also describes the operation and characteristics of vacuum phototubes, vacuum-tube amplifiers, transistors, cascade amplifiers, and oscillators connected to a current generator. There are 8 references of which 7 are Soviet and 1 English.

V. Ya. Sutyagin, Engineer. Average-current Transistor
Amplifiers
The author discusses the operation and characteristics
Card 3/12

SOV/1778

of average-current transistor amplifiers. He derives formulas for calculation of amplifier performance under the following conditions:

1. collector and base circuits supplied with d-c;
2. collector circuit supplied with d-c and the base circuit with a-c;
3. collector circuit supplied with d-c and the base circuit with d-c;
4. collector and base circuits both supplied with a-c. He also discusses transistor application in phase-sensitive circuits, inverter circuits and servomechanism systems and describes the temperature stability of transistor output stages. There are no references.

V.I. Lebedev, Candidate of Technical Sciences. Characteristics of Common-collector Transistors The author discusses the equivalent circuit of common-collector transistors and derives expressions for the transfer function and attenuation-frequency characteristics. He also derives formulas for calculating transistor performance and discusses the effect

71

Card 4/12

SOV/1778

of a capacitive load and temperature on transistor response. There are 3 references of which 2 are Soviet (including 1 translation), and 1 English.

V.T. Dimitriyev, Candidate of Technical Sciences. Transistor

95

The author analyzes single - and multistage feedback transistor amplifier circuits and discusses their frequency and phase characteristics. He also describes the methods and circuits used in stabilizing transistor operation and discusses circuits for measuring transistor gain. There are 9 Soviet references (including 6 translations).

T.M. Agakhanyan, Engineer. Approximate Determination of the Transfer Function and Transistor Response to an Abritrary Pulse The author determines the transfer function for

114

Card 5/12

SOV/1778

a transistor circuit by means of the Maclaurin series and presents a theoretical analysis of transistor response to an applied current and voltage pulse of an arbitrary shape. There are 14 references of which 10 are Soviet (including 1 translation), and 4 English.

V.P. Nechayev, Engineer. Thermal Stabilization of Pulse Circuits Using Junction-type Transistors
The author describes the operating principle of monostable multivibrators using junction-type transistors and discusses the factors causing instability. He also discusses the effect of temperature on pulse width and describes temperature stabilization by means of diodes and thermistors. There are 3 references of which 2 are Soviet and 1 English.

G.G. Fridolin, Engineer. Transistor Oscillators and Their Application The author briefly describes the operation and application of the following transistor circuits:

135

127

Card 6/12

SOV/1778

oscillators with inductive capacitive feedback, tuned oscillators, tetrode transistor oscillators, frequency multipliers, frequency— and phase—mod—ulated oscillators, blocking oscillators, inverters, crystal—controlled oscillators, relaxation oscillators and oscillators converting sinusoidal signals into rectangular and triangular waves. There are 12 references of which 2 are Soviet, 7 English, 2 French and 1 German.

V.A. Timofeyev, Engineer. Transistor Oscillator With Improved Stability

154

The author describes a transistor oscillator circuit using a crystal resonator and a thermostat for controlling the temperature of the oscillator. He also derives expressions for calculating oscillator performance and discusses circuits for measuring deviation from a standard frequency. A discussion of oscillator frequency variation with ambient

Card 7/12

SOV/1778

temperature is also presented. There are 5 Soviet references (including 1 translation).

A.F. Pashchevskiy, Engineer. Some Results of an Analysis of Junction Transistor Oscillators
The author discusses the operation and static characteristics of junction-type transistor oscillators and shows the dependence of transconductance on oscillator frequency. He also derives expressions for determining the conditions for oscillation and discusses the effect of variation of the supply voltage and ambient temperature on oscillator stability. There are 6 references of which 4 are Soviet and 2 English.

Ye, B. Kostyukevich, Engineer. Analysis and Calculation of Multivibrator Relaxation Oscillators Using a Single-stage Point-contact Transistor The author describes the operation of a point-contact transistor multivibrator and derives basic equations for calculating

192

170

Card 8/12

SOV/1778

oscillator performance. He also discusses the effect of load capacitance on the shape and duration of generated pulses and describes voltage stabilizing circuits using diodes and pulse transformers. Fundamentals of designing the oscillator are also presented. There are 5 references of which 4 are Soviet and 1 English.

N.I. Chicherin, Candidate of Technical Sciences. Some Practical Circuits of Servomechanism Systems Using Transistors and Magnetic Amplifiers

The author briefly describes the operation of single-loop and two-loop servosystems using magnetic amplifiers. Chickens and trans-

225

The author briefly describes the operation of single-loop and two-loop servosystems using magnetic amplifiers, crystal diodes and transistors. There are 5 references of which 3 are Soviet and 2 English.

A.S. Shaftan, A.A. Petrovskiy, A. Ya. Nekrasovskiy, Engineers. New Relay for Signalling and Control The authors duscuss the construction and

238

Card 9/12

SOV/1778

operation of the REUV-2 electronic relay used in control systems of coal mines. The relay uses DGTs-26 crystal diodes and P3A or PBV transistors. There are no references.

B.M. Matveyev, A.I. Pivovarov, Engineers. Experience in the Development of Photoelectric Relays Using Semiconductors

243

The authors describe the construction and operation of FRS-10 and FRS-11 photoelectric relays using junction-type triode transistors and discuss relay characteristics and constructional features. The relays were developed at the laboratory of Uralmetallurgavtomatika. There are no references.

B.V. Kol'tsov, Engineer. Dispatcher-operated System Using Nonlinear Capacitors and Transistors for Remote Control of Mines

252

The author briefly describes the operation of a remote control system used in mines. Chief attention is given to the operation of transmitting and receiving devices and their

Card 10/12

sov/1778

267

components, such as pulse generators and pulse distributing circuits using nonlinear capacitors and pulse forming circuits and coincidence circuits using transistors. There are 6 references of which 3 are Soviet and 3 English.

S.V. Misaylovskiy, Engineer. Coding and Decoding Devices Using Transistors

The author discusses a two-channel transmission system containing coding and decoding devices and describes the system components, such as pulse oscillators and modulators using transistors. There are no references.

V.V. Grebnev, Engineer. A Remote Control System Using
Transistors
The author describes the circuit and presents
the results of an experimental analysis of
the transistor coding system of a six-chamnel

Card 11/12

SOV/1778

remote control line. There are no references.

AVAILABLE: Library of Congress

JP/rj 6-8-59

Card 12/12

DMITRIYEV, Vladimir Timofeyevich; ROMANENKO, V.P., red.; TSYURKO, M.I., tekhn.red.

[Bol'shoy Gey; a journalist's notes] Bol'shoy Gay; zapiski zhurnalista. Orenburg, Orenburgskoe knizhnoe izd-wo, 1960.
58 p. (MIRA 14:2)
(Bol'shoy Gey)

N/5 722.101 .D6

DMITRIYEV, V

Kolkhoz umeni Zhdanova (Zhandov collective farm) Moskva, Sel'khozgiz, 1952.

189 p. illus., tables.

At head of title: Kolkhozy nashey strany.

DMITRIYEV, V.V.

[Our experience with material incentives for collective-farm, employees; a collection of articles] Nash opyt material'nogo pooshchreniia kolkhoznikov; sbornik statei. Izd.2., perer. i dop. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1955. 237 p.

(Wages) (Collective farms)

DMITRIYEV, V V

N/5 762.201 .D6

Opyt oplaty truda v kolkhozakh (Wage practices on collective farms) Moskva, Sel'khozgiz, 1956.
251 p.

762.201 N/5 722.101 N/5

MEA

- 1. DESITRIYEV, V. V.
- 2. USSR (600)
- 4. Geography Study and Teaching
- 7. Practices in the organization of geography evenings. Geog. v shkole no. 6. 1952.

9. Monthly Lists of Russian Accessions, Library of Congress, arch 1953, Unclassified.

DMITRITEV, V.V., inshener.

Examination of the operation under actual conditions of the D-183S scraper and the D-258 trailer. Stroi.i dor.mashinostr. no.9:15-16 S '56. (MLRA 9:11)

IVANOV, V.G., dotsent, kand. biolog. nauk; DMITRIYEV, V.V.

Birds of prey of the Kabariino-Balkar A.S.S.R. Uch. zap. Kab-Balk. gos. un. no.1C::173 '61. (MIRA 17:6)

MATSKEVICH, N.V.; TETERYATNIK, A.F.; DMITRIYEV, V.V.; BRYZGALOVA, L.S.

Possibilities of selecting Actinomyces spheroides variants which have lost the ability to produce actinophage. Antibiotiki 10 no.8:693-701 Ag '65. (MIRA 18:9)

1. Vsesoyuznyy nauchno-issledovatel skiy institut antibiotikov, Moskva.

Route lay-out and leveling with a tacheometer. Trudy LIIZHT no.165:20-37 '59. (MIRA 13:6)

DMITRIYEV, V.V., kand.tekhn.nauk, dotsent

Railroad clothoidal curves. Trudy LIIZHT no.180:3-11 '61.

(MIRA 15:7)

(Railroads--Curves and turnouts)

IMITRIYEV, V.V., kand. tekim. nauk, dotsent

Diagrams for the plotting of curves in surveying. Sbor.trud.LIIZHT no.199:47-53 '62. (MIRA 16:2)

(Railroads—Surveying)

AUTHORS:

Onosova, S. P., Dmitriyev, V. Ye. SOV/75-13-4-27/29

TITLE:

The Detection of the Uranyl Ion (Otkrytiye iona uranila)

PERIODICAL:

Zhurnal analiticheskoy khimii, 1958, Vol. 13, Nr 4, pp. 503-

503 (USSR)

ABSTRACT:

The method described in publications for the detection of the uranyl ion in the presence of larger amounts of foreign ions  $(Fe^{3+}, Cr^{3+}, Cu^{2+}, Ni^{2+}, Co^{2+}, Ti^{4+}, Zr^{4+}, Th^{4+}, Vo_3^{-}, MoO_4^{2-})$ et al.) proved to be unreliable when it was checked, as on the addition of potassium ferrocyanide to the solution (Ref 1) in many cases colored deposits are formed; thus a correct conclusion as to the presence of uranium in the solution to be investigated is rendered impossible. Other methods (Refs 2, 3) are of no practical importance. The authors of the present article elaborated a method for the detection of uranyl ions in a solution containing  $Mg^{2+}$ ,  $Mn^{2+}$ ,  $Zn^{2+}$ ,  $Ni^{2+}$ ,  $Co^{2+}$ ,  $Al^{3+}$ ,  $Cr^{3+}$ ,  $Fe^{3+}$ ,  $Ce^{3+}$ ,  $Pb^{2+}$ ,  $Cu^{2+}$ ,  $Cd^{2+}$ ,  $Be^{2+}$ ,  $Ti^{4+}$ ,  $Zr^{4+}$ ,  $Th^{4+}$ ,  ${\rm VO}_3^{-}$ ,  ${\rm MoO}_4^{2-}$ , and  ${\rm WO}_4^{2-}$ . A great number of these ions is on

Card 1/3

· The Detection of the Uranyl Ion

507/75-13-4-27/29

this occasion kept in solution by the addition of complexon III. The uranyl together with the hydroxides of several metals present is precipitated with concentrated ammonia. The precipitate is treated with boiling 10% soda or ammonium carbonate solution with the uranium passing into solution. One part of the filtrate is diluted with one drop of 30% hydrogen peroxide solution. The immediate formation of green color points to the presence of uranium in the solution (when soda is used for the working off of the precipitate also chromium can pass into solution; the yellow color of the chromate does, however, not develop immediately). The proof of uranium in this way is also successful at a ratio between uranium and chromium of 1:1 000. When ammonium carbonate is used the detection is also fully reliable in the presence of great amounts of chromium. After the treatment with ammonium carbonate or soda a small amount of solid soda or some drops of potassium ferrocyanide solution are added to another part of the filtrate, and then a little amount of 2n nitric acid is added carefully. A brown ring is formed at the boundary surface between soda solution and acid in the presence of ura-

Card 2/3

nium. This method makes possible the detection of 10<sup>-5</sup> g ura-

The Detection of the Uranyl Ion

507/75-13-4-27/29

nium per ml (maximum dilution 1:100 000) in the presence of large amounts of other elements. The prescription for the proof is described in detail. There are 3 references, 3 of which are Soviet.

ASSOCIATION:

Ural'skiy politekhnicheskiy institut im. S. M. Kirova, Sverdlovsk (Ural Polytechnical Institute imeni S. M. Kirov, Sverdlovsk)

SUBMITTED:

April 25, 1957

Uranyl ions—Detection
 Uranyl—Precipitation
 Colorimetry—Effectiveness
 Reagents—Performance

Card 3/3

DMITRIYEV, V.Ye., inch.

Study of the efficiency of the K-160-130 turbine and block as a whole unit. Teploanergetika 12 no.11:20-24 N '65.

(MIRA 18:10)

1. Yushnoye otdeleniye Gosudarstvennogo tresta po organizateii i ratsionalizateii rayonnykh elektrostantsiy i setey.

NICHKOV, I.F.; DMITRIYEV, V. Ye.; RASPOPIN, S.P.

Anode solution of bismuth alloys with thorium and lead in fused chlorides. Izv. vys. ucheb. zav.; tsvet. met. 4 no.2:81-87 161. (MIRA 14:6)

1. Ural'skiy politekhnicheskiy institut.
(Bismuth alloys—Electrometallurgy)

8/149/61/000/002/006/017 A006/A001

AUTHORS:

Nichkov, I.F., Dmitriyev, V.Ye., Raspopin, S.P.

TITLE:

Anodic Dissolving of Bismuth Alloys With Thorium and Lead in Molten

Chloric Salts

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy, Tsvetnaya metallurgiya, 1961, No. 2, pp. 81 - 87

TEXT: To complete information on the anodic behavior of pure lead and bismuth in molten chlorides of alkali metals, needed for a correct analysis of data on the anodic behavior of Bi-Th-Pb alloys, the authors present results from investigations on the anodic polarization of bismuth, lead and bismuth, alloyed with thorium and lead. The electrolyte was prepared using pure LiCl, NaCl, KCl. The equimolar NaCl-KCl mixture and the eutectic KCl-LiCl mixture were blast cleaned after melting with dry hydrogen chloride and subsequently degassed in a vacuum. The melts obtained were cooled, analyzed as to their bismuth content, and used to prepare electrolytes with the necessary BiCl, content. Purification of bismuth metal was carried out by chlorination under an electrolyte layer for 2 hours with dry hydrogen chloride. To eliminate electro-negative impurities the metal was sub-Card 1/8

S/149/61/000/002/006/017 A006/A001

Anodic Dissolving of Bismuth Alloys With Thorium and Lead in Molten Chloride Salts

jected to anodic dissolving for 3 hours at a current density of 0.05 amp/cm2. To obtain bismuth alloy with thorium the grit of these metals was pressed into small bars which were alloyed in an alundum crucible in pure argon atmosphere at 1,300°C. This method was used to obtain bismuth alloys with 2.5 weight % thorium and ternary alloys on bismuth base containing 2.5% Th + 1.0% Pb and 2.5 % Th + 5.0% Pb. Polarization of anodes was measured in a closed refractory glass cell (Fig. 1). The cell was placed in a protective container in a furnace with an automatic thermoregulator maintaining a constant temperature of 700  $\pm$  5°C. The alloy investigated was placed in one of the branches of the cell after melting of the electrolyte. A molybdenum wire protected by a porcelain tube was employed as power connection. A bismuth cathode was placed in another branch of the cell. The ancde potential was measured in relation to the comparison lead electrode at the moment of polarization current break, with the aid of a loop oscillograph. The vibrator indices were recorded on a photographic film. The readings were taken with a MNP -12 (MIR-12) microscope. The results of measurement given in a series of graphs, show that a considerable difference exists between the anode potentials when dissolving bismuth and lead, and also thorium contained in the alloy. The different electro-

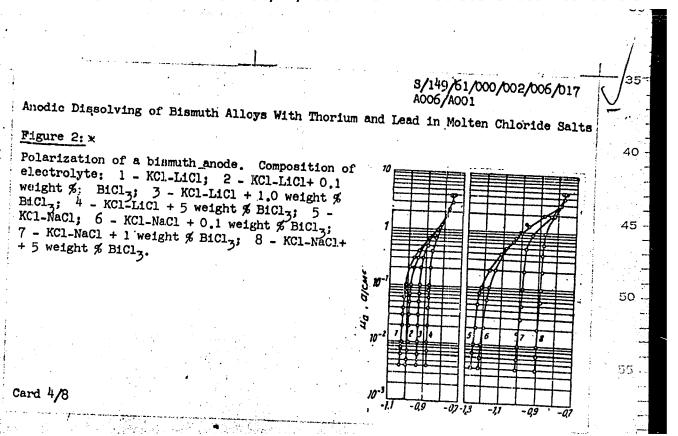
Card 2/8

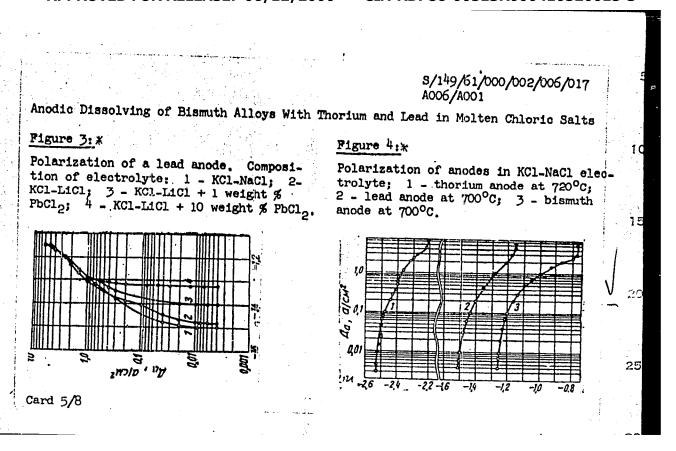
Anodic Dissolving of Bismuth Alloys With Thorium and Lead in Molten Chloride Salts chemical behavior of Th, Pb and Bi during the process of anodic dissolving in molten chloric salts can be used for the selective separation of Th and Pb from alloys with bismuth. A table shows the time of electrolysis remuted for the full elimination of lead and thorium from the alloys.

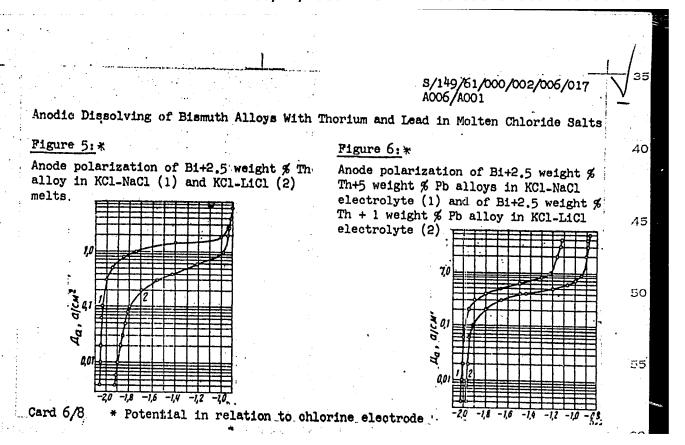
Figure 1:

Schematic drawing of the cell; 1 - cathode power connection; 2 - anode power connection; 3 - tube for blowing through the electrolyte; 4 - thermocouple; 5 - electrolyte; 6 - comparison lead electrode; 7 - bismuth cathode; 8 - anode in
Vestigated.

Card 3/8







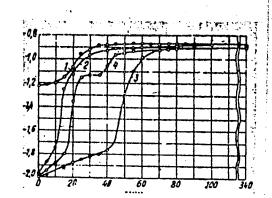
S/149/61/000/002/006/0 A006/A001	)17	7
A006/A001		5

Anodic Dissolving of Bismuth Alloys With Thorium and Lead in Molten Chlorine Salts

#### Figure 7:

Anode polarization in KCl-LiCl electrolyte of alloys: 1 - Bi+5 weight % Pb at 1 = 0.2 amp/cm<sup>2</sup>; 2 - Bi+2.5 weight % Th at 1 = 0.1 amp/cm<sup>2</sup>; 3 - Bi+2.5 weight % Th at 1 = 0.04 amp/cm<sup>2</sup>; 4 - Bi+2.5 weight % Th + 1.0 weight % Pb at 1 = 0.04 amp/cm<sup>2</sup>.

> Anode potential in relation to chlorine electrode



•	4.0		1	•		8/149/0 AOO6/A	61/000/002/006/017 001	<del></del> 2
, •		nuth Alloys or the diss	19			•	olten Chlorine Salts	4
C d a s s' Alloy		Alloy a nopenus, a-4			Время, необходн- мое для раство- с рення, мнн. required for dis-			
Cornesition 0	eightec, 2,	Th Pb	Th	b	Pb		solving, amp/hr ) Current intensity, amp ) Time required for	4
31 + 2,5 sec. % Th	3.7 0.185 4.0 — 0.185	0,048 0,192 -	0,023 0,045	0,10 0,05 0,05	, <del>_</del>	28 53	dissolving, min.	
		0,100 0,010 ble and 15	0,023	0,05 noes;	13 14 Sc	28 oviet and	1 non-Soviet.	
	Jral'skiy June 6, 19		cheskiy	inst	itut (1	Ural Poly	technic Institute)	-1

ACCESSION NR: AP5002646

\$/0096/64/000/010/0024/0030

AUTHOR: Chaban, O.I. (Engineer); Dmitrivey V. Ye. (Engineer); Futorskiy, B. M. (Engineer); Guseynov, M. Kh. (Engineer); Bobkov, V. S. (Engineer)

TITLE: A study of the 150 megawatt block under variable and constant steam pressures

SOURCE: Teploenergetika, no. 10, 1964, 24-30

TOPIC TAGS: steam turbine, steam boiler, steam auxiliary equipment/TGM-94 boiler, K-160-130 turbine

Abstract: The article compares the operation of a boiler-turbine block for the case of conventional control by the turbine valves and for the case of control by varying steam pressure. On the basis of numerous diagrams the authors discuss the resistance to flow in the steam ducts, the steam temperatures, the steam consumption, and the efficiency of the TGM-94 boiler and K-160-130 turbine operating as a 150-Mwatt block. The constant pressure operation is always advantageous at loads above 125 Mwatt, while the variable pressure operation is more economical at loads below 85 Mwatt.

Card 1/2

ACCESSION NR: AF5002646

The steam condensers used in variable pressure operation must have a 40% larger capacity than in the case of constant pressure operation. Further studies should be conducted with other units placing special emphasis on below 90-Matt operation. Orig. art. has 11 formulas, 7 graphs

ASSOCIATION: Yuzhnoye otdeleniye ORGRES (South Division of the ORGRES); GRES "Severnaya"

SUBMITTED: 00

ENCL: 00

SUB CODE: PR. IE

NO REF SOV: OO2

OTHER: OOO

JPRS

Card 2/2

TEPLITSKIY, M.G., inzh.; DMITRIYEV, V.Ye., inzh.

Study of the efficiency of the leading VT-25-5 turbogenerator mit. Energ. i elektrotekh. prom. no.1:45-48 Ja-Mr 165. (MIRA 18:5)

EMITRIYEV, V.Ye., inzh., TEPLITSKIY, M.G., inzh.

Operation of a 150 Mr. block. Energ. i elektrotekh. prom. no.3:54-57 Jl-S '65. (MIRA 18:9)

CHEPURNOV, V.S.; BURNASHEV, M.S.; DIMITRIYEV, Ya.I.; STRIZHEN", O.S.

Problems of the ecology of fishes in the northwestern part of the Black Sea and in the lower Dniester and Danube Rivers. Uch. zap. Kish. un. 62 no.1:1-2 '62. (MIRA 16:7)

CHEPURNOV, V.S.; DYMITRIYEV, Ya.I.

Studies on rearing gray mullets in the limans of Odessa Province and practical measures for increasing their production. Uch. sap. Kish. un. 62 no.1:53-62 '62. (MIRA 16:7)

1. Kafedra zoologii pozvonochnykh zhivotnykh Kishinevskogo gosudarstvennogo universiteta.

(Odessa Province--Gray mullets)

CHEPURNOV, V.S.; BURNASHEV, M.S.; DMITRIYEV, Ya.I.; LAZUR'YEVSKAYA, T.G.

One day's ration and feeding rhythm of young Black Sea flounder (Pleuronectes flesus luscus Pall.) in the Shabolat Liman. Uch. zap. Kish. un. 62 no.1:73-80 '62. (MIRA 16:7)

l. Kafedra zoologii pozvonochnykh zhivotnykh Kishinevskogo gosudarstvennogo universiteta.
(Shabolat Liman—Flounders)
(Shabolat Liman—Fishes—Food)

DYMITRIYEV, Ya.I.

Ichthyofauna of the Shabolat Liman and its genetic relation with the Black Sea. Uch. sap. Kish. un. 62 no.1:81-92 '62.

(MIRA 16:7)

1. Kafedra soologii posvonochnykh shivotnykh Kishinevskogo gosudarstvennogo universiteta.

(Shabolat Liman-Fishes)

GOIDBEV, N.I., prof.; DMITRIYEV, T. Ya., ordinator

Hew method of the treatment of median postoperative abdominal hernias. Sbor. maich. rab. Sar. gos. med. inst. 44:61-65 '64.

Simple method of plactic surgery in extensive postoperative ventral hernias. Ibid.:66-68

(MRe 18:7)
1. Iz kliniki fakul'tetskoy knirurgii (zav. - prof. k.1. Golukev)
pediatricheskogo fakul'teta Saratovskogo meditsinakogo instituta
(rektor - dotsent H.R. Francy) i khirurgiekoskogo etdeleniya dorozhnoy klinicheskoy bol'nitsy Privolahskoy zhelennoy dorogi
(nachal'nik bol'nitsy - R.F. Bararenko).

DMITHIYEV, Yu.Ya., ordinator

iate results of the treatment of extensive postoperative abdewing hernias using Professor N.I. Golubev's second method. Sbor. nauch. rab. Sar. gos. med. inst. 44:68-71 164.

Ureteral diverticulum. Ibid.:211-213

Use of thiopental in asphyxia from drowning. Ibid.:230-232

Improvement of the technique of auscultation during areathesis. Tbid.:232-233 (NIRA 18:

DMITRIYEV, Ye.

Konstantin Fedorovich Muon. IUn. nat. no.12:28 D '61. (MIRA 15:1) (IUon, Konstantin Fedorovich, 1875-)

r OTHOR:

Dmitriyev, Ye.A. (Engineer)

50V/94-58-9-3/30

TITLES

Boiler water level alarm and automatic feed water controller type SUAP-2 (Pribor tipa SUAP-2-signalizator urovnya vody i avtomat pitaniya vodoy parovogo kotla )

PERIODICAL:

Promyshlennaya Energetika, 1958, No.9. pp. 11-12 (USSR)

ABSTRACT 8

In 1957 new safety rules were introduced according to which steam boilers with a capacity of 2.tons per hour and more must be provided with water level signals and automatic feed control. This article describes instrument type SUAP-2 developed by the author for this purpose. A steel tube containing 4 electrodes is connected in parallel with the normal gauge glass, the electrical circuit of the instrument is given, the principle is that each electrode is connected to a valve grid that becomes negative as the electrode is immersed; a relay then operates. The two centre electrodes are used to stop and start the feed pumps at the appropriate water levels. The two outer electrodes are used to give alarm signals of excessively low or high water level. The operation of the instrument is described in detail. Since October, 1957, these instruments have been installed on boilers of the

Card 1/2

 $$\rm SOV/94-58-9-3/30$$  Boiler water level alarm and automatic feed water controller type SUAP-2.

'Laborpribor' Works and have given good results. The instrument has been approved by the appropriate authorities and the first batch will be produced in 1958. There is I figure:

- 1. Boilers--Control systems 2. Liquid level control--Equipment
- 3. Feed-water regulators--Design 4. Boilers--Safety measures

Card 2/2

(liceased

1.2300

27813 S/549/61/000/101/011/015 D256/D304

AUTHORS:

Yevseyev, G.B., Candidate of Technical Sciences, Docent, and Dmitriyev, Ye.A. (Deceased), Engineer

TITLE:

Investigation and development of the technology of gas cutting technical titanium

PERIODICAL:

Vyssheye tekhnic skoye uchilishche. Trudy. Svarka tsvetnykh splavov, redkikh metallov i plastmass, no. 101, 1961, 217 - 223

TEXT: The authors are concerned with developing a gas cutting process for 2.5 and 5 mm thickness type BTl 2 (VTMD2) technical titanium and elucidating its thermal effect on the microstructure. Conventional techniques give a wide heat-affected zone in material particularly, susceptible to overheating in an oxidizing atmosphere. Satisfactory cut edges were obtained only by the use of a low-power oxy-acetylene preheating flame (acetylene flow not more than 300 1/min), concentrated heating, and high cutting speeds. These conditions were met by modifying an PM-2 (RM-2) machine cutter, the Card 1/4

27813 \$/549/61/000/\(\bar{\phi}\)011/015 D256/D304

Investigation and development ...

No. 4 mixing chamber being replaced by a No. 2 and a No. 3 injector fitted. In the first experiments nozzle No. 1 was used with only one preheating jet retained, so that the preheating and cutting jets were in tandem. This arrangement gives clean cut surfaces and a narrow heat-affected zone, but is only suitable for straight cutting, so that in the remaining work two concentric nozzles were used, forming an annular preheating jet, with a central cylindrical jet for cutting oxygen. In this case the diameter of the annular jet was 3.9 mm and the cylindrical jet 2 mm. Increasing the cutting jet bore gives a smaller heat-affected zone, presumably because more hot metal is eliminated by the jet. The cutting jet-plate distance should be as small as possible to pvide concentrated heating, and for cutting 2.5-5 mm thick titanium the optimum is 3-4 mm. To minimize heating at the cut surfaces the speed should be as high as possible - for straight cutting 2600-2800 mm/min for 2.5 mm sheet and 1500-2600 mm/mins. for 5 mm sheet. Cutting daygen pressure should be 4-5 atmospheres. Under these conditions the heat-affected zone does not extend for more than 1-1.2 mm. For curved profiles the cutting speed is lower by 10-15 %, with all Card 2/4

27813 S/549/61/000/101/011/015 D256/D304

Investigation and development ...

other parameters the same. To obtain high quality cutting with a uniformly narrow heat-affected zone it is necessary to use a steel run-on plate of thickness 1.5-2.5 mm for 2.5-5 mm titanium. Metallographic examination reveales in almost all cases an outer lightething zone of fine acicular α'phase forming as a result of the saturation of the metal with oxygen and nitrogen. Sometimes this zone has a columnary structure, testifying to the preferential effect of nitrogen. The greatest width of alpha zone was obtained at relatively low cutting speeds (2100 mm/min) and amounts to about 0.1 mm, while at higher speeds (about 2880 mm/min) it shrinks to 0.04 mm. A darker well-etching heat-affected zone adjoins the alpha, also possessing the typical α'-phase acicular structure At low magnification two layers of equal width are distinctly visible, differing in crystal main form and size, indicative of a different degree of recrystallization. At higher magnifications the acicular structure of the α'-phase is plainly discernible in both layers of the heat-affected zone rectaining a width of 0.8 - 1 mm. There are 7 figures and 3 references: 1 Soviet-bloc and 2

Card 3/4

Investigation and development ...

27813 S/549/61/000/101/011/015 D256/D304

non-Soviet-bloc. The references to the English-language publications read as follows: G. Coates, Oxygen Cutting Titanium and Titanium Alloys, Engineer, 1957, vol. 203, No. 5270, 132 - 134; Torch cutting Tatanium before machining speeds operation, gives good results, Western Metals, Vol. 12, No. 188, 1954, 54-56.

W

Card 4/4

Decenuer

YEVSEYEV, G.B., kand.tekhn.nauk; DMITRIYEV, Ye.A., inzh. [deceased]

Investigating and developing the process of pack cutting of thin-sheet stainless steel. Trudy MVTU no.106:106-111 '62. (MIRA 16:6)

(Gas welding and cutting)

DMITRIYEV, Ye.

Conquerors of virgin oil fields. NTO 6 no.3:22-24 Nr 164. (MIRA 17:6)

l. Nachalinik geologicheskogo upravleniya Gosudarstvennogo komiteta neftedobyvayushchey promyshlennosti, predsedateli geologicheskog sektsii TSentralinogo pravleniya Nauchnotekhnicheskogo obshchestva neftyanov i gazovey promyshlennosti.